

WHAT IS CLAIMED IS:

1. A lens comprising:

a curved surface having a function as a lens,

a plane surface disposed in a virtually perpendicular direction to an optical axis, and

a reflecting part which is disposed on said plane surface, reflects light within a predetermined waveband with reflectivity higher than said curved surface, and transmits light outside the waveband.

2. The lens as defined as claim 1, wherein said reflecting part is formed so as to cover said plane surface and said curved surface.

3. The lens as defined in claim 1, wherein said reflecting part includes at least one dielectric film.

4. The lens as defined in claim 1, wherein said reflecting part includes at least one of an MgF_2 film, a TiO_2 film, and an SiO_2 film.

5. The lens as defined in claim 1, wherein said reflecting part includes an aluminum film and a dielectric film which is provided thereon.

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7. The lens as defined in claim 6, wherein said plane surface is formed at a circumference of said lens, and said reflecting part is formed on a surface of a lens functioning section as well as on said plane surface, said lens functioning section acting as a lens at an inner radius of said plane surface.

8. A lens comprising a plane surface whose normal direction virtually conforms to an optical axis direction, said plane surface being provided with a reflecting part composed of an aluminum film and a dielectric film that are stacked in this order on said plane surface.

a curved surface having a function as a lens,
a plane surface disposed in a virtually perpendicular
direction to an optical axis,
a reflecting part which is disposed on said plane

[illegible]

assuming that a receiving side for inclination detection light is a front side, each said lens being provided with a plane surface on a front-facing surface thereof in a virtually perpendicular direction to an optical axis, a plurality of said lenses each being larger in diameter than a preceding lens.

at least one of said lenses includes a reflecting part on said plane surface, said reflecting part reflecting light within a predetermined waveband with reflectivity higher than said curved surface.

12. The optical pickup device as defined in claim 11,
wherein each said lens includes said reflecting part, and
a wavelength differs between lenses regarding light

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14. The optical pickup device as defined in claim 13,
wherein said reflecting part is formed on said plane surface
of each said lens, and

15. The optical pickup device as defined in claim 13,
wherein said reflecting part is formed on said plane surface
of each said lens, and

16. An optical pickup device, which emits a light beam condensed by combined lenses to an optical recording medium, wherein a plurality of lenses constituting the combined lenses each have a plane surface on a surface thereof, that

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faces an optical recording medium at a circumference of said lens, said plane surface having a normal direction virtually conforming to an optical axis,

a reflecting part is formed on at least said plane surface of one or more of a plurality of said lenses, said reflecting part increasing reflectivity of at least specific light received from the optical recording medium, and

assuming that a side facing the optical recording medium is a front side, each said lens is larger in outer diameter than a preceding lens.

17. The optical pickup device as defined in claim 16, wherein a front lens of said lenses is a planoconvex lens including a plane surface at a front and a convex surface at a rear, and said reflecting part is formed at the circumference of said lenses disposed at a second and later from said front side.

18. The optical pickup device as defined in claim 16, wherein said lenses are provided with said reflecting parts, each part reflecting light within a different waveband.

19. The optical pickup device as defined in claim 16, wherein said reflecting part is formed such that when parallel light is emitted to said combined lenses from the

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20. A method for detecting lens inclination,
said lens including:
a curved surface having a function as a lens,
a plane surface disposed in a virtually perpendicular
direction to an optical axis, and
a reflecting part which is disposed on said plane
surface, reflects light within a waveband with reflectivity
higher than said curved surface, and transmits light outside
the waveband,
said method comprising:
a step 'a' of emitting light for detecting inclination
to said lens; and
a step 'b' of detecting a position of a condensing spot
formed by light reflected from said reflecting part.

21. The method for detecting lens inclination as defined in claim 21, wherein in the step 'a', the light for detecting inclination is not emitted to said curved surface but only to said plane surface and said reflecting surface.

22. A method for detecting lens inclination comprising:
a step 'a' of emitting light for detecting inclination

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to a plurality of lenses so as to emit the light to plane surfaces thereof, said lenses being disposed in an optical axis direction with predetermined intervals, said plane surfaces being disposed in a virtually perpendicular direction to an optical axis,

a step 'b' of detecting a position of a condensing spot formed by light reflected from said plane surface of each said lens.

23. The method for detecting lens inclination as defined in claim 22, wherein in the step 'a', parallel light is used as the light for detecting inclination.

24. The method for detecting lens inclination as defined in claim 22, wherein in the step 'a', light is reflected on a reflecting part provided on said plane surface of at least one of said lenses so as to form a condensing spot, which is larger in quantity of light than that of a spot formed by light reflected on a lens functioning section provided on each said lens, and

in the step 'b', the position of the condensing spot is detected.

25. The method for detecting lens inclination as defined in claim 22, wherein in the step 'a', light within

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a different waveband for each said lens is reflected on a reflecting part provided on said plane surface of each said lens, and light reflected from said reflecting parts are separated from each other.

26. The method for detecting lens inclination as defined in claim 22, wherein in the step 'a', the light for detecting inclination is emitted to a reflecting part provided on said plane surface of each said lens, and light equal in quantity is reflected on each said reflecting part.

27. The method for detecting lens inclination as defined in claim 22, wherein in the step 'a', the light for detecting inclination is not emitted to a lens functioning part provided on each said lens but only to said plane surface.

28. A method for detecting lens inclination, that detects inclination of combined lenses including a plurality of lenses, each having a plane surface at least at a circumference thereof, said plane surface having a normal direction virtually conforming to an optical axis direction, said method comprising the step of emitting parallel light to said combined lenses and detecting inclination of said combined lenses based on light reflected therefrom.

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29. The method for detecting lens inclination as defined in claim 28, wherein a reflecting part for increasing reflectivity of the parallel light is formed on said plane surface of at least one of said lenses included in said combined lenses, and

inclination of said combined lenses is detected based on light reflected from said reflecting part.

30. A method for detecting lens inclination, in which parallel light is emitted to a lens and inclination of the lens is detected based on light reflected therefrom, said lens including a plane surface at least at a circumference thereof, said plane surface having a normal direction virtually conforming to an optical axis direction,

said method comprising the step of, upon detecting inclination, preventing the parallel light from entering a lens functioning section by using a light-shielding member, said lens functioning section acting as a lens at an inner radius of said plane surface.

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